

#### Human Factors Guideline-

As a result of a Federal Highway Administration mini-scanning tour in 1995 it was found that no comprehensive human factor guideline for road design existed. In fact, most countries relied on individual research reports and experience when design and operational issues arise concerning road users, road design, and traffic control. It was realized that a guideline that recommended appropriate design, operations, and traffic control features was very much needed and sought and the practice of sound human factors principles is one of the fundamental foundations of achieving good highway safety. Since 1995 the Transportation Research Board (TRB) has sponsored working sessions between various European countries and TRB committees to discuss how a human factor guideline for road systems design could be developed and what technical areas it should include. In January 2000, a TRB Joint Subcommittee was officially formulated for the purpose of facilitating the development of the guideline.

Since January 2001 two workshops were held, one in Washington, D.C. and one in Brussels to bring together future users of the guideline to help define what kinds of information it should include and how the information should be presented. An illustrated Guideline was developed showing how the guideline might be formulated. The illustrated Guideline was a conceptual effort to encourage the future users of the document to identify and offer their ideas on what will be most helpful to them in planning and designing road and traffic control systems that recognize the needs and constraints of the road users. The final Guideline may look entirely different from this illustration. The illustrated Guideline and additional Guideline information can be found at: <http://webboard.trb.org/~A3B00/login>.

In September 2001 the National Cooperative Research Program (NCHRP) initiated study 17-18(8), Human Factors Guidelines (HFG) for Road Systems-Phase 1, under the direction of Westat. Westat developed a proposed outline for the HFG and is now completing the introductory sections plus one technical chapter. A second NCHRP effort will be initiated in the spring of 2004 and it will provide three or four more additional technical chapters.

The HFG is to be a resource that highway designers and traffic engineers can readily use in their work. It will serve as a complement to existing and planned design guides and standards, such as the *Manual on Uniform Traffic Control Devices*, AASHTO's *Policy on Geometric Design of Highways and Streets*, and the planned Highway Safety Manual. While existing design standards recognize some basic road user design parameters, the standards do not provide sufficient explanation and background to develop solutions to the many, varied types of design and operational problems associated with human behavior and capabilities. Human factors guidelines are needed to provide engineering solutions to human-centered safety problems and to address aspects of roadway safety specifically from the road user perspective. The ultimate goal is to develop the HFG as a comprehensive set of human factors safety guidelines to assist engineers and others to achieve safer and more useable design, operation, and maintenance of roadways. For emphasis and illustration it is envisioned that parts of the technical discussions may be animated to highlight the important highway design, traffic control, and human factors

issues. Although there may be many groups who make use of the HFG, the primary audience is those practitioners dealing with design and operational issues in their normal course of work. Therefore, the HFG must be user friendly and easily cross-referenced with existing design manuals.

The TRB Joint Subcommittee is working close with NCHRP in developing the HFG. A workshop is planned for the spring of 2004 to review the draft chapters from the first NCHRP effort and make recommendations on future chapters and directions. Interim drafts of the HFG will be published as they are developed.